other indication of insect agency. It is possible that we have here a result of insect action becoming hereditary. If so, these cones would furnish an additional and excellent proof of the principle which Prof. Henslow supports by an abundance of ingenious argument and illustration.

A specially interesting part of the book is the author's summary of his reasons for rejecting the famous Darwinian theory embodied in the aphorism, "Nature abhors close fertilization." He concludes that the benefits of cross-fertilization are comparatively transient, and that naturally self-fertilized plants are, upon the whole, more successful in the struggle for life than those with ingenious appliances for heterogamy. Not a little force is added to Prof. Henslow's controversion of some of Darwin's most important doctrines by his quotations from the great naturalist's later writings, showing that the trend of the latter's views, near the close of his life, was directly towards the conclusions here reached. E. E. S.

Index to Recent American Botanical Literature.

Arctic Plants growing in New Brunswick, with notes on their Distribution. James Fowler. (Trans. Roy. Soc. Canada, v., (1887), 189-205.)

Prof. Fowler demonstrates the remarkable fact, that of 257 native arctic plants in New Brunswick, 241 are natives of Arctic Europe, and in particular of Scandinavia and Lapland, while but 167 are indigenous to Arctic East America. He accounts for this distribution by climatal and regional similarities. The old theory is maintained that a homogeneous arctic flora covered the polar regions before the Glacial Epoch, and on the advent of the cold and ice was driven southward on both continents; that on the recession of the glaciers this flora, decimated and considerably modified, crept back until it reached its present condition, local differences being due mainly to climatal causes. It is a very pretty theory and one could desire no better explanation of the present state of arctic vegetation, if we only knew that its premises were correct. Unfortunately we do not know this, but instead, the researches of Heer have shown that in late Tertiary time the arctic flora was almost tropical in character, and no in-

dication of the present boreal vegetation has been had prior to Glacial time. While this fact remains it appears that we cannot regard the prevalent theory as wholly acceptable. Mr. Fowler's tabulations of the Flora are of great interest and a valuable contribution to geographical botany. N. L. B.

Asclepias tuberosa, var. flexuosa, n. var. Joseph F. James. (Bot. Gazette, xiii., 271.) This novelty is native in the Cumberland Mts., Tennessee.

Botanical Nomenclature in North America. Edward L. Greene. (Journ. Bot., xxvi., 326-328.)

This forms another chapter in a discussion now in progress, and we commend its perusal to those botanists who are still anxious to use binomials as against specific names of greater antiquity, while the many who hold to the other view will find in it facts and arguments which cannot fail to strengthen them in the better practice.

California Woods in Autumn. Edward L. Greene. (Garden and Forest, i., 422-423.)

Carex Notes from the British Museum. L. H. Bailey. (Journ. Bot., xxvi., 321-323.)

Professor Bailey is doing Cyperology valuable service in examining old types in the great Herbaria of the Old World. If we mistake not, he will be able to show that such comparisons were much needed. In the present paper he gives us a few of the results reached at South Kensington, including descriptions of *Carex nova*—surely a fitting name for a new species—the *C. atrata, var. nigra* of various American botanists, a native of the Rocky Mountain region.

Concerning the Citation of Authors. Edward L. Greene. (Pittonia, i., 231-237.)

Prof. Greene here gives especial attention to the faulty practice adopted by some writers of citing Bentham and Hooker as authors of binomials which they never created. His arguments are, we judge, conclusive on this point. He also consistently maintains the position that accepted and familiar binomials, if pre-Linnæan, should be cited as of pre-Linnæan authors, and gives us examples of cases where this has been done by botanists of as good repute as Dr. Gray and Baron von Mueller. The

reasons assigned are certainly weighty, and must command our most serious attention. The writer, in common with many others, has thought that the science of nomenclature would be best served by stopping at some especial date, and thus obtaining a fixed point from which to proceed. Linnæu's Species Plantarum of 1753 has been quite generally adopted as this point of departure by botanists; ornithologists go back a few years farther. No particular reason may perhaps be assigned for 1753 as over the date of Rivinus, which Prof. Greene alludes to, other than one of convenience as a problem widely considered as settled. But a thorough discussion of the principles involved can only be productive of good. N. L. B.

Desmids of Maine. Wm. West. (Journ. Bot., xxvi., 339-340.)

An enumeration of species found in a collection made by Prof. Aubert at Orono, being 73 species additional to Prof. Harvey's published list.

Ephedra.—The Stem of.—Walter H. Evans. (Bot. Gazette, xiii., 265-269; one plate and cuts in the text.)

Figuring Against Weeds. Byron D. Halsted. (Amer. Nat., xxii., 774-779). Statistics of Iowa weeds, which are divided into 84 Annuals, 27 Biennials and 186 Perennials. As to origin 87 are exotics and 210 American.

Flora of the Santa Barbara Islands. T. S. Brandegee. (Proc. Cal. Acad. Sci., 2nd Series, i., 201-226.)

This includes (1) additions to the Flora of Santa Cruz Islands, including about 80 species not recorded in Prof. Greene's Catalogue; (2) Flora of Santa Rosa Island, this making up the greater part of the paper. No new species are described, but no less than 21 of those characterized by Prof. Greene from this archipelago are stated to be forms of or identical with old ones. This sweeping reduction must command our wonder, and we can but admire the intrepidity with which it is done. But we may naturally inquire, will these species stay reduced?

Mr. Brandegee visited these islands to obtain wood specimens of the curious trees which grow thereon, for the Jesup wood collection at the American Museum of Natural History, brought together by Prof. Sargent. Dr. Watson is recorded as assisting

* BULLETIN, this volume. pp. 155-161.

in determining several species, while all the grasses collected were submitted to Dr. Vasey. N. L. B.

Florida.—A Floral Almanac of.—Dr. A. Schaffranek. (4to, pamphlet, pp. 37, Palatka, 1888.)

A list of plants arranged in order of flowering, from January to December, 1,700 species in all, the first being *Ulmus alata* and the last *Borrichia arborescens.*

Fungi Fuegiani. (Bull. Acad. Sci. de Cordoba, xi., 176. 1887.)

Fungi Patagonici. (Bull. Acad. Sci. de Cordoba, xi., 61. 1887.)

Ginsengwurzel (*Aralia quinquefolia*). Fr. Hoffman. (*Pharm.* Rundschau, vi., 258-259, one figure.)

Hibiscus lasiocarpus. Sereno Watson. (Garden and Forest, i., 425-426; fig. 68.)

History of Garden Vegetables. E. Lewis Sturtevant. (Amer. Nat., xxii., 802-808; continued.)

Ice Plant, (*Mesembryanthemum crystallinum*); Italian corn salad, (*Valerianella eriscarpa*); Jerusalem Artichoke, (*Helianthus tuberosus*); and Kale in its many modifications, (*Brassica oleracea acephala*) are here discussed.

Lichenes Montevidenses, quos legit et communicant Prof. Arechavaeleta. Determinavit Dr. J. Mueller. (Revue Mycologique, x., 1-5.)

Lichenes Paraguenses a Cl. Balansa lecti. Dr. J. Mueller. Revue Mycologique, x., 53-68.)

List of the Writings of Dr. Asa Gray, chronologically arranged. Sereno Watson and Geo. L. Goodale. (Amer. Journ. Sci., xxxvi. Appendix, pp. 68; reprinted.)

This list is divided into: (1) Scientific Works and Articles, comprising 359 separate items; (2) Botanical Notices and Book Reviews, among which we find mention of almost every botanical work of importance which has appeared in fifty years; and (3) Biographical Sketches, Obituaries, &c., mainly from the pages of the American Journal of Science, of which Dr. Gray was botanical editor for nearly the same period. The pamphlet is carefully indexed, which adds very greatly to its value. Prof. Goodale requests that any corrections or omissions noted be promptly forwarded to him.

Morels and Puff-balls of Madison, Wis. Wm. Trelease. (Trans.

Wisconsin Acad. Sci., Arts and Letters, vii., 105-120; three plates. Reprinted.)

A list of species of *Morchella*, *Lycoperdon*, *Secotium* and *Scleroderma* with complete descriptions and critical notes and abundant references to authorities and illustrations.

Mycologic Flora of the Miami Valley, Ohio. A. P. Morgan. (Journ. Cincin. Soc. Nat. Hist., xi., 86-95; continued.) This part completes the enumeration of the Hymenomycetes.

Nutzpflanzen Brasiliens. Theodor Peckelt. (Pharm. Rundschau, vi., continued through several numbers.)

Dr. Peckolt, an apothecary at Rio Janeiro, is contributing a series of valuable notes on the economic plants of Brazil.

Phlox nana. Sereno Watson. (Garden and Forest, i., 413, fig. 66).

Dr. Watson notes that this species shares with *P. Drummondi* the unusual character of producing in the wild state flowers of several different colors.

Pollination of Phlomis tuberosa, and the Perforation of Flowers. L. H. Pammel. (Trans. St. Louis Acad. Sci., v., 241-277; two plates; reprinted as Contributions from the Shaw School of Botany, No. 1.)

The elastic-hinged upper lip of the corolla in the Jerusalem Sage is pushed back by visiting insects, whose backs are dusted with pollen from the anther cells lying within this arched upper lip. The process is described in detail. The seeond part of Mr. Pammel's interesting paper is a valuable review of the whole subject of flower perforation, accompanied by a lengthy and doubtless very complete bibliography.

Rosa Nutkana. Sereno Watson. (Garden and Forest, i., 449; fig. 70.)

Stuartia pentagyna and *Aralia spinosa.* C. S. Sargent. (Garden and Forest, i., 415.)

Both recorded as very abundant: and in their greatest perfection on the western slopes of the Big Smoky Mts. of Tennessee.

Süsserwasser und Luftalgen.—Ueber einige in Porto Rico gesammelte, M. Möbius. (Hedwigia, xxii., 221-249; two plates.)

Dr. Möbius has worked up the fresh water algæ collected by P. Sintensis in Porto Rico. A form identified as *Compsopogon chalybeus*, Kg., is correlated with one figured in Wolle's Fresh

Water Algæ, t. 70 from Florida. *Phyllactidium tropicum* is a new genus and species from the leaves of species of Orchidaceæ, and is thoroughly described and illustrated, its symbiotic nature being discussed at length. *Microcoleus thelophoroides* (Mont.), Möbius, is a new species in Cyanophyceæ.

Useful plants of Southern California. C. R. Orcutt. (Garden and Forest, i., 414-415.) Notes on *Romneya Coulteri, Simmondsia Californica* and *Prunus ilicifolia.*

Proceedings of the Club.

The regular meeting was held at Columbia College, November 12th, the Vice-President in the chair and 39 persons present.

Mrs. Sarah D. Robinson and Miss Sarah J. Agard were elected active members.

Dr. A. Rimondi, of Lima, Peru, Don José Arechavaleta, of Montevideo, and Prof. W. D. Alexander, of Honolulu, were elected corresponding members.

Mr. E. P. Bicknell read a series of notes on the flora of the Palisades of the Hudson and the opposite New York shore.

Mr. Hollick read a paper on a recent discovery of hybrid oaks on Staten Island, illustrated by drawings and specimens of *Quercus Phellos, Q. heterophylla* and *Q. rubra.*

Professor Schrenk read a paper on the inflorescenee of *Callitriche*, illustrated by microscopical preparations, specimens and drawings. He held that the two bracts or sepals at the base of the flower are in reality floats, as he had found them in *C. heterophylla* to be hollow and filled with air.

At the adjourned meeting held November 28th, the Vice-President was in the chair and 23 persons present.

Mr. Justus F. Poggenburg, Chairman of the Field Committee, submitted a report on the excursions held during the past season, from which the following is extracted : In all, 28 excursions were arranged, the Committee endeavoring to select localities not before visited by the Club, or such from which no reports were available. All plants seen were carefully noted at the several localities, and specimens of the rarer or more interesting species preserved. The lists thus obtained will be available for the use of the Flora Committee. No plants new to the 100 mile circle